

Quality Assurance of Small Area Dwelling Counts: Comparisons with Small Area Population Estimates and other measures

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1. Summary of main findings

This paper contains a summary of some analysis carried out by GROS to assess the quality of our small area dwelling counts. This analysis involved comparing the trends in the number of dwellings, and the overall population, of each data zone in Scotland, between 2003 and 2006, and using other sources of information to explain any unusual results.

The trends in population and the number of dwellings between 2003 and 2006 were broadly consistent for most data zones in Scotland. Overall, the population and number of dwellings increased slightly from 2003 to 2006, with the number of dwellings increasing at a slightly faster rate than population. There were some data zones which had large discrepancies in the data. In some areas, the trends in population and dwellings did not match each other, and there were other areas in which there were particularly large changes in population and in the number of dwellings. We have managed to explain these differences and have developed improved quality assurance (QA) procedures for the 2007 dwelling counts.

2. Purpose

The aims of this paper are:

- to provide summary analysis of the overall trends in GROS published dwelling counts and population estimates between 2003 and 2006.
- to identify changes in the distribution of small area population estimates and dwelling counts over time and to identify data zones with unusual values. These should help to explain some of the discrepancies between population estimates and dwelling counts.
- to describe the improved quality QA processes which were used for the 2007 dwelling counts. These procedures will be used for QA of the 2008 dwelling counts.

3. Background

Trends in the numbers of dwellings and population are expected to be closely linked. GROS has published dwelling counts at data zone level on the Scottish Neighbourhood Statistics website (www.sns.gov.uk) for 2003 and subsequent years, and small area population estimates which date from before this. This meant that we could compare dwelling and population data for a number of years. We decided to improve the quality assurance procedures for the 2007 dwelling counts, following the identification of a small error in the data. By using the revised quality assurance method we identified some data zones in which there were large changes in the numbers of dwellings from 2006 to 2007. We then looked at trends in the numbers of dwellings and population at data zone level to see if these changes were in line with overall trends.

4. Results

The tables and charts referred to in this paper are shown in [Annex A](#). A description of the way in which this analysis was carried out is shown in [Annex B](#). [Annex C](#) contains examples of data zones which have had particularly large changes in population and/or dwellings from 2003 to 2006, and explanations for these changes.

Population estimates and dwelling counts for each local authority area

Before looking at data zone statistics specifically, it is worthwhile to look at some summary results for local authority areas to identify key trends in population and dwellings. [Table 1](#) shows the estimated population and dwelling counts for 2006. The population of Scotland in 2006 was 5.12 million and there were 2.42 million dwellings. This equates to an average of 2.11 people per dwelling. [Table 2](#) shows the percentage change in the population and number of dwellings in each local authority area, between 2003 and 2006. It shows that the estimated population of Scotland has increased by 1.2 per cent between 2003 and 2006, and that the number of dwellings has increased by 3.2 per cent over the same time period. [Figure 1](#) is a scatter plot showing the same information as [Table 2](#). This shows that overall, there is a positive relationship between changes in population and the number of dwellings from 2003 to 2006. There has been an increase in the population and in the number of dwellings in 21 local authority areas between 2003 and 2006. There has been a decrease in both the population and in the number of dwellings for only one local authority area (Inverclyde). For the remaining ten local authority areas there was a decrease in the population but an increase in the number of dwellings.

Distribution of small area population estimates and dwelling counts

[Tables 3a](#) and [3b](#) contain summary statistics of population estimates and dwelling counts for all data zones in Scotland for the years 2003 to 2006. The largest data zone population was 2,891 in 2003 and for 2006, it was 4,510. The equivalent figures for dwelling counts were 1,087 in 2003 and 1,891 in 2006. The smallest data zone population was 377 in 2003 and for 2006, it was 0. The equivalent figures for dwelling

counts were 85 in 2003 and 0 in 2006. The median data zone population has remained broadly constant, at just below 770, between 2003 and 2006. For dwelling counts, the median value for data zones has increased from 348 in 2003 to 355 in 2006.

Figures 2a and 2b are histograms which show the distribution of population estimates and dwelling counts for each data zone in 2006. Figure 2a shows that 94 per cent of data zones had an estimated population between 500 and 1,100. Figure 2b shows that 88 per cent of data zones had between 200 and 500 dwellings, with most of the remaining data zones having more than 500 dwellings.

Changes in small area population estimates and dwelling counts from 2003 to 2006

Table 4 summarises the changes in estimated population and number of dwellings of data zones between 2003 and 2006. A large change is defined in this paper as a greater than ten per cent increase or decrease in the population or dwellings between 2003 and 2006. Key points from this table are:

- In over 80 per cent of data zones, there have been no large changes in either the population or the number of dwellings from 2003 to 2006.
- Six per cent of data zones have seen large increases in both population and the number of dwellings from 2003 to 2006. This is almost 400 data zones.
- There has been a large decrease in both population and in the number of dwellings in 51 data zones. This is less than one per cent of all data zones in Scotland.
- Over four per cent of data zones have had at least a ten per cent increase in the number of dwellings, with no corresponding change in population. Over one per cent of data zones experienced a large decrease in the number of dwellings, without a corresponding change in the population.
- Five data zones (0.08 per cent of all data zones) have seen a large decrease in population and large increase in dwellings.

Figure 3 is a scatter plot which shows the same information as Table 4, for all data zones in Scotland. Each point on the scatter plot represents a data zone. Figure 3 clearly shows those data zones which had particularly large increases or decreases in population and/or dwellings from 2003 to 2006. These have been labelled on the scatter plot and further information on these data zones can be found in Annex C. There are also four dashed lines on the graph, which are shown in blue. These indicate the following points

- A ten per cent increase in population from 2003 to 2006.
- A ten per cent decrease in population from 2003 to 2006.
- A ten per cent increase in dwellings from 2003 to 2006.
- A ten per cent decrease in dwellings from 2003 to 2006.

Annex C consists of 12 data zones which have been chosen from the scatterplot in Figure 3 to highlight examples of data zones

- which have experienced large changes in either population or dwellings between 2003 and 2006

- where trends in population from 2003 to 2006 do not match trends in dwellings. This Annex investigates and explains for those data zones in which there were unusual or extreme or unexpected trends in either population or dwellings in 2003 and 2006, and this will help us in the QA of dwelling counts in future years.

5. Conclusions

In general, the trends between the population estimates and number of dwellings between 2003 to 2006 were very similar for many, but not all, data zones. There will be always some data zones which contain discrepancies between dwelling counts and population estimates. However, by using other sources of data we were able to explain these apparent “discrepancies”. GROS should therefore continue to undertake detailed quality assurance procedures prior to publishing dwelling count data, to identify and explain these differences.

Martin Macfie
GROS: Household Estimates and Projections Branch
January 2009

Annex A. Tables and Charts**Table 1. Population Estimates and Dwelling Counts for each local authority area, 2006**

Local Authority	Population Estimates	Dwellings	Average number of people per dwelling	Number of data zones in LA
Scotland	5,116,900	2,424,049	2.11	6,505
Aberdeen City	206,880	108,877	1.90	267
Aberdeenshire	236,260	104,573	2.26	301
Angus	109,320	52,576	2.08	142
Argyll & Bute	91,390	45,930	1.99	122
Clackmannanshire	48,900	22,893	2.14	64
Dumfries & Galloway	148,030	70,723	2.09	193
Dundee City	142,170	72,364	1.96	179
East Ayrshire	119,290	54,438	2.19	154
East Dunbartonshire	105,460	43,566	2.42	127
East Lothian	92,830	42,412	2.19	120
East Renfrewshire	89,290	36,616	2.44	120
Edinburgh, City of	463,510	226,934	2.04	549
Eilean Siar	26,350	13,797	1.91	36
Falkirk	149,680	69,159	2.16	197
Fife	358,930	165,112	2.17	453
Glasgow City	580,690	296,644	1.96	694
Highland	215,310	105,668	2.04	292
Inverclyde	81,540	39,184	2.08	110
Midlothian	79,290	34,193	2.32	112
Moray	86,750	40,728	2.13	116
North Ayrshire	135,490	64,844	2.09	179
North Lanarkshire	323,780	144,865	2.24	418
Orkney Islands	19,770	9,809	2.02	27
Perth & Kinross	140,190	66,492	2.11	175
Renfrewshire	169,590	81,232	2.09	214
Scottish Borders	110,240	54,135	2.04	130
Shetland Islands	21,880	10,250	2.13	30
South Ayrshire	111,670	52,768	2.12	147
South Lanarkshire	307,670	138,994	2.21	398
Stirling	87,810	38,346	2.29	110
West Dunbartonshire	91,240	43,839	2.08	118
West Lothian	165,700	72,088	2.30	211

Table 2. Changes in population and dwelling counts for each local authority area, 2003-2006

Local Authority	% change in estimated population. 2003 to 2006	% change in dwellings 2003 to 2006
Scotland	1.2%	3.2%
Aberdeen City	-0.3%	2.5%
Aberdeenshire	3.3%	4.9%
Angus	1.8%	3.0%
Argyll & Bute	0.1%	2.9%
Clackmannanshire	2.6%	5.9%
Dumfries & Galloway	0.6%	3.3%
Dundee City	-0.8%	0.4%
East Ayrshire	-0.2%	2.3%
East Dunbartonshire	-1.4%	1.5%
East Lothian	1.9%	4.8%
East Renfrewshire	-0.4%	0.9%
Edinburgh, City of	3.4%	3.6%
Eilean Siar	1.0%	1.1%
Falkirk	2.6%	4.3%
Fife	2.0%	3.1%
Glasgow City	0.6%	3.1%
Highland	3.0%	4.8%
Inverclyde	-1.8%	-0.6%
Midlothian	-0.5%	2.1%
Moray	-0.4%	3.4%
North Ayrshire	-0.4%	3.2%
North Lanarkshire	0.6%	4.1%
Orkney Islands	2.4%	4.2%
Perth & Kinross	3.1%	4.0%
Renfrewshire	-0.8%	0.9%
Scottish Borders	1.8%	3.6%
Shetland Islands	0.0%	2.4%
South Ayrshire	0.1%	3.0%
South Lanarkshire	1.5%	4.3%
Stirling	1.7%	2.6%
West Dunbartonshire	-1.2%	0.4%
West Lothian	2.9%	5.6%

Figure 1. Scatter plot of the percentage change between small area population estimates and dwelling counts for each local authority area in Scotland between 2003 and 2006

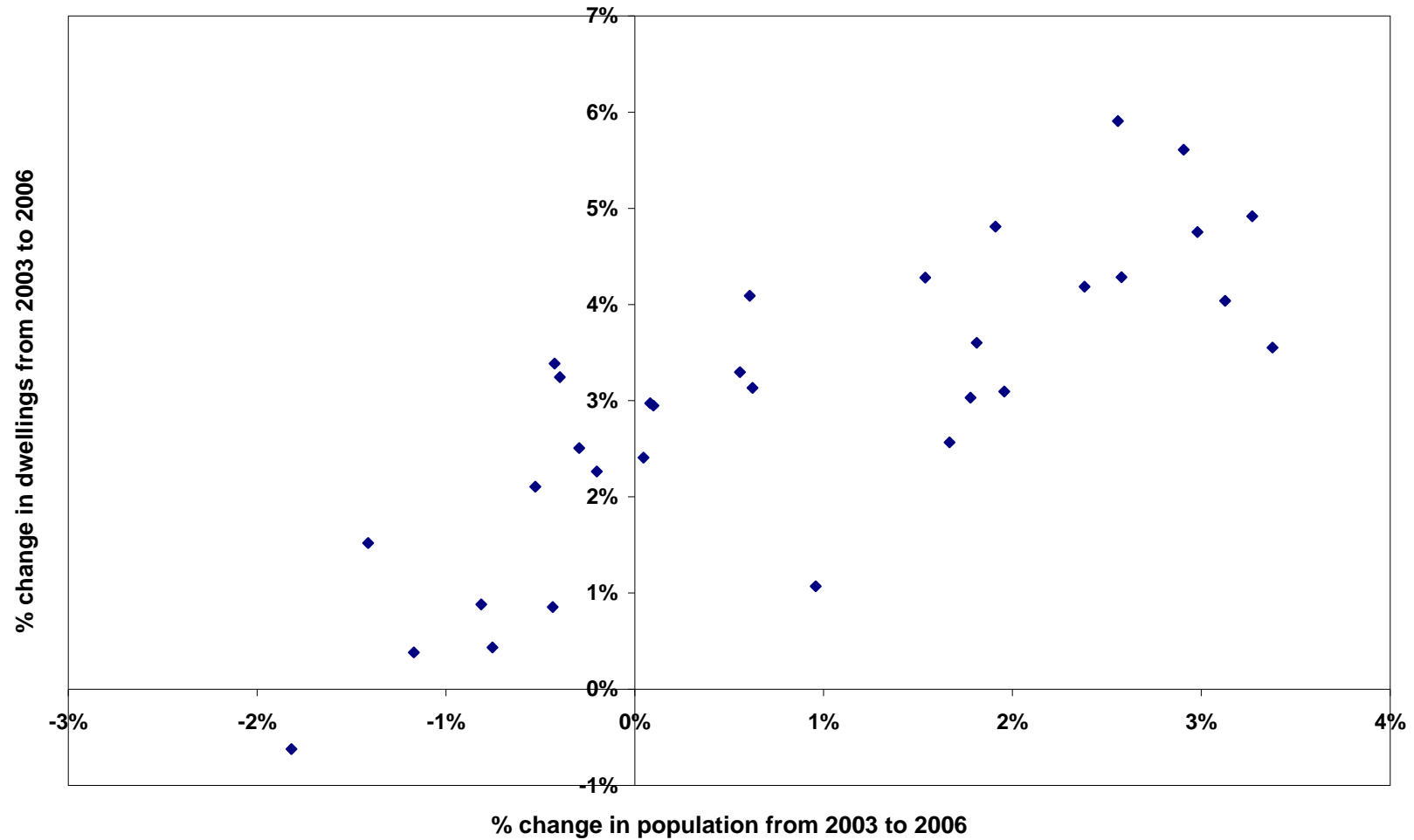


Table 3a. Population estimates: Summary statistics for all data zones in Scotland, 2003-2006

	Small Area Population Estimates			
	2003	2004	2005	2006
Minimum value	377	248	224	0
5th percentile (5% of data zones are below this value)	542	540	537	537
Lower quartile (25% of data zones are below this value)	662	661	660	657
Median (50% of data zones are below this value)	769	769	768	768
Upper quartile (75% of data zones are below this value)	885	887	887	888
95th percentile (95% of data zones are below this value)	1,020	1,037	1,050	1,071
Maximum value	2,841	3,200	4,024	4,510
Number of data zones	6,505	6,505	6,505	6,505

Table 3b. Dwelling counts: Summary statistics for all data zones in Scotland, 2003-2006

	Small Area Dwelling Counts			
	2003	2004	2005	2006
Minimum value	85	91	0	0
5th percentile (5% of data zones are below this value)	231	233	234	235
Lower quartile (25% of data zones are below this value)	293	296	297	298
Median (50% of data zones are below this value)	348	352	354	355
Upper quartile (75% of data zones are below this value)	413	418	422	426
95th percentile (95% of data zones are below this value)	535	547	558	564
Maximum value	1,087	1,427	1,682	1,891
Number of data zones	6,505	6,505	6,505	6,505

Figure 2a. Distribution of population estimates for data zones in Scotland, 2006

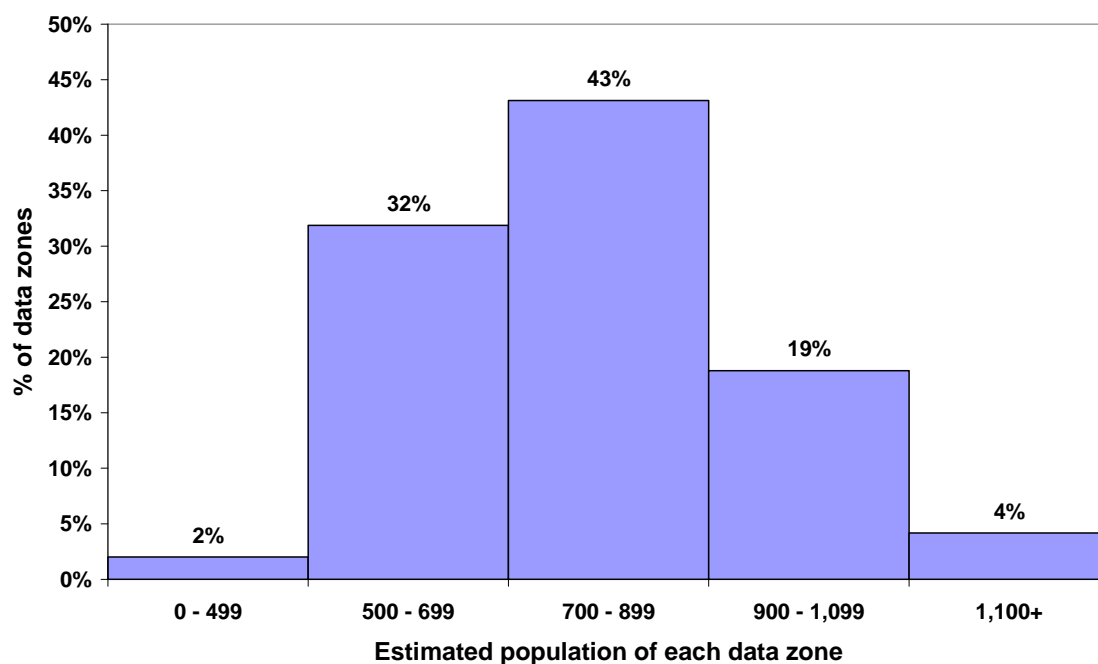


Figure 2b. Distribution of dwelling counts in data zones in Scotland, 2006

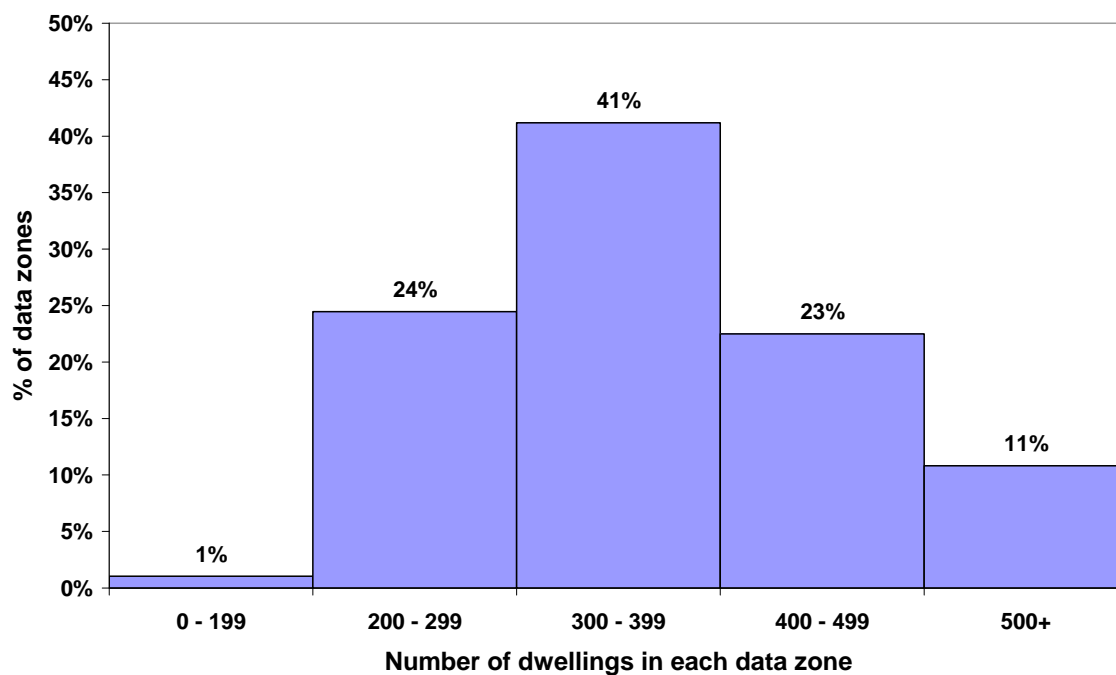
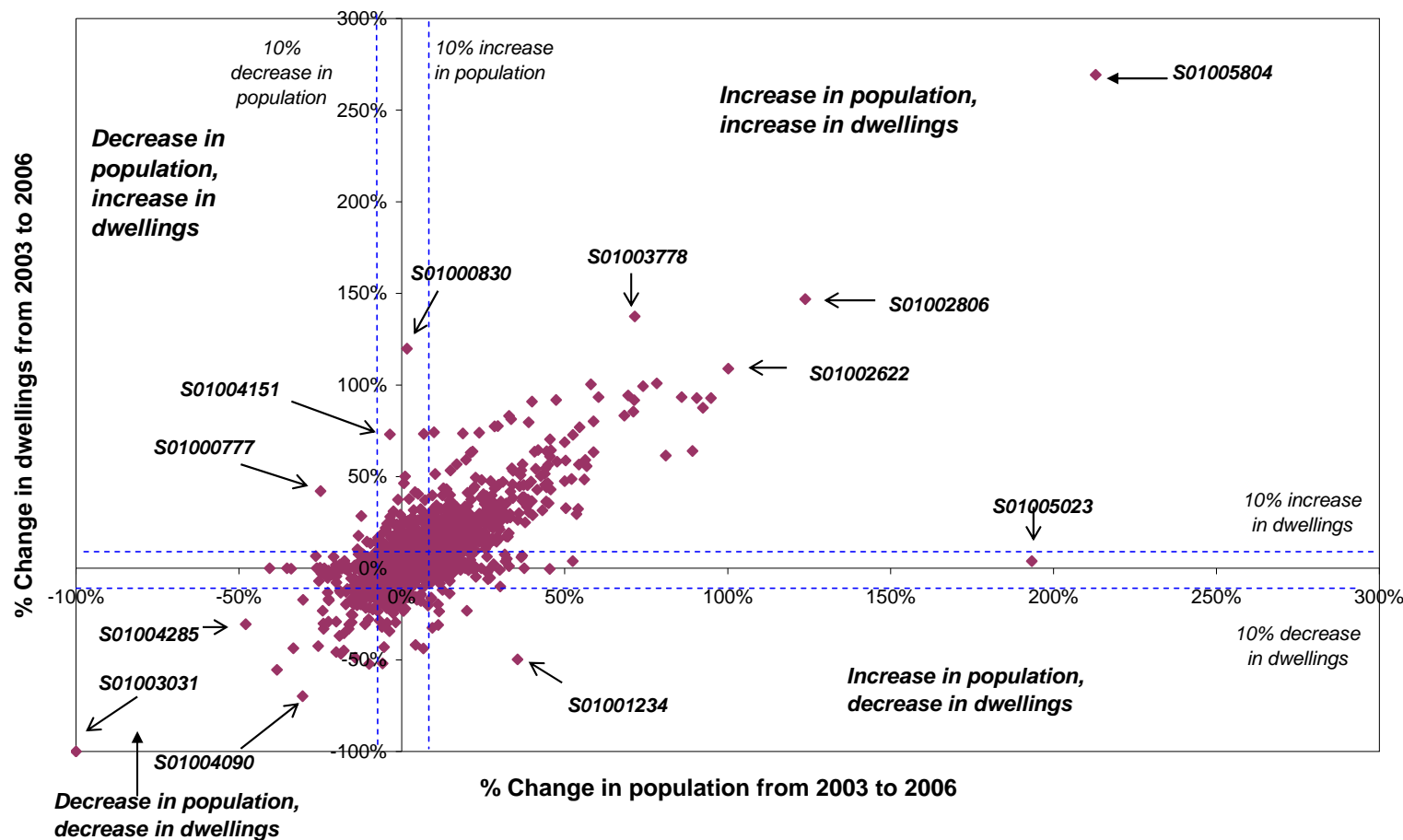


Table 4. Changes in estimated population and number of dwellings between 2003 and 2006

Changes to SAPEs and Dwelling Counts between 2003 and 2006	Number of data zones	% of all data zones
NO LARGE CHANGES IN POPULATION OR DWELLINGS¹		
Up to a 10% change in both population and dwellings ¹	5,359	82.4%
INCREASE IN BOTH POPULATION AND DWELLINGS		
Over a 50% increase in both population and dwellings	26	0.4%
Over a 50% increase in population and a 10% to 50% increase in dwellings	5	0.1%
A 10% to 50% increase in population and over a 50% increase in dwellings	33	0.5%
A 10% to 50% increase in both population and dwellings	331	5.1%
INCREASE IN POPULATION, NO LARGE CHANGES IN DWELLINGS		
Over a 50% increase in population and up to 10% change in dwellings ¹	2	0.0%
A 10% to 50% increase in population and up to 10% change in dwellings ¹	191	2.9%
INCREASE IN POPULATION, DECREASE IN DWELLINGS		
Over a 10% increase in population and over a 10% decrease in dwellings	8	0.1%
NO LARGE CHANGES IN POPULATION, INCREASE IN DWELLINGS		
Up to a 10% change in population ¹ and over a 50% increase in dwellings	5	0.1%
Up to a 10% change in population ¹ and a 10% to 50% increase in dwellings	290	4.5%
NO LARGE CHANGES IN POPULATION, DECREASE IN DWELLINGS		
Up to a 10% change in population ¹ and a decrease of 10% to 50% in dwellings	81	1.2%
Up to a 10% change in population ¹ and a decrease of over 50% in dwellings	1	0.0%
DECREASE IN POPULATION, INCREASE IN DWELLINGS		
Over a 10% decrease in population and over a 10% increase in dwellings	5	0.1%
DECREASE IN POPULATION, NO LARGE CHANGES IN DWELLINGS		
Over a 10% decrease in population and up to a 10% change in dwellings ¹	117	1.8%
DECREASE IN BOTH POPULATION AND DWELLINGS		
A 10% to 50% decrease in both population and dwellings	47	0.7%
A 10% to 50% decrease in population and over a 50% decrease in dwellings	3	0.0%
Over a 50% decrease in both population and dwellings	1	0.0%
TOTAL	6,505	100.0%

¹ Up to a ten per cent change in population can signify up to a ten per cent increase or a ten per cent decrease in population in any given data zone. Similarly, up to a ten per cent change in dwellings can signify up to a ten per cent increase or a ten per cent decrease in the number of dwellings in any given data zone.

Figure 3. Scatter plot of the percentage change between small area population estimates and dwelling counts for all data zones in Scotland between 2003 and 2006



The data zones which have been identified on this chart have had particularly large changes in either population or in the number of dwellings between 2003 and 2006. These data zones are examined in more detail in [Annex C](#).

Annex B. Details of the improved quality assurance procedures for the 2007 dwelling counts

There are two stages to the quality assurance procedures that we carried out for the 2007 dwelling counts. Firstly, we looked at the changes in the number of dwellings and the population in each data zone. Where we found results which looked unusual, we then looked at other sources of data to try to identify the reason(s) for this. This is described in more detail below.

a) Looking at changes in number of dwellings and the population in each data zone

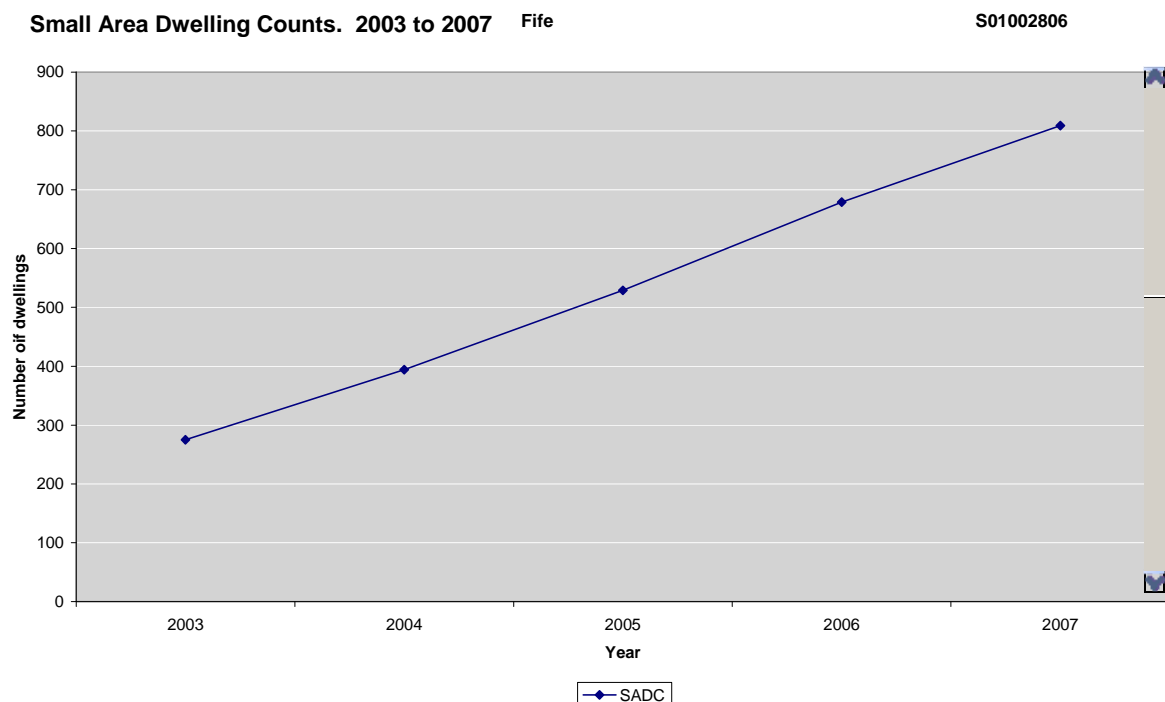
GROS set up a more robust QA system in MS Excel prior to publishing the 2007 dwelling counts. The QA incorporated GROS data on published GROS Small Area Population Estimates and Dwelling Counts for each data zone from 2003 to 2007.

The Excel workbook contained two scroll charts:

- The first contained data on the numbers of dwellings for each data zone from 2003 to 2007
- The second contained data on the estimated population from 2003 to 2006 and numbers of dwellings for each data zone from 2003 to 2007.

The scroll charts were automated, so that the relevant trends in population and dwellings could be easily produced for each data zone in turn. An example of a chart for a data zone, can be seen in [Figure 4a – S01002806 in Fife](#).

Figure 4a. Scroll chart containing trends for dwellings, for the QA of dwelling counts, for data zone S01002806 in Fife.



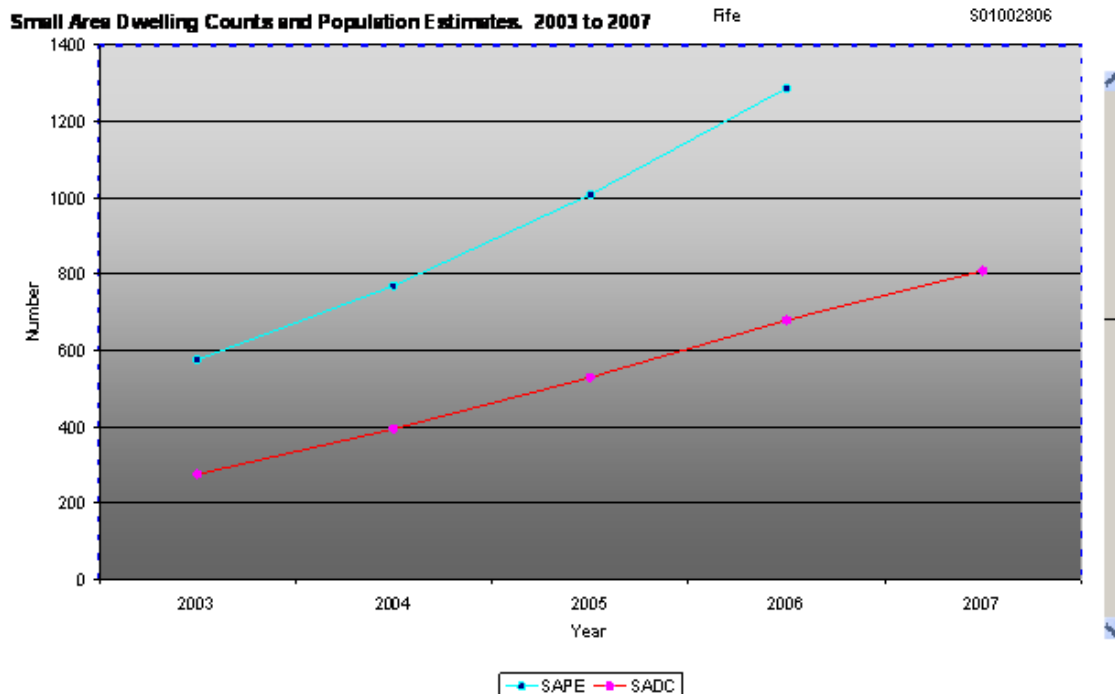
Note: SADC = Small Area Dwelling Counts

The system automatically calculated the difference in the number of dwellings between 2007 and 2006 for each data zone. It then identified those data zones which had a large change in the numbers of dwellings between 2006 and 2007. This was defined as being an absolute difference of 25 or more dwellings. In 2007, 413 data zones (six per cent of all data zones) had seen an absolute difference of at least 25 dwellings from the 2006 figures. We chose the figure of 25 to signify a large change in dwellings from one year to the next, as such a difference could be caused by significant changes, such as a new development, which could impact on other measures, such as GROS mid-year population estimates.

These data zones were examined in more detail to understand and explain the large changes occurring in each data zone. By using the scroll chart which contained dwelling counts between 2003 and 2007 for that data zone, it was possible to see whether the difference between 2006 and 2007 was in line with past trends. If this was the case, the difference in the number of dwellings in this data zone could be explained.

If the change in dwellings from 2006 to 2007 did not fit with the trend in dwelling counts from 2003 to 2006, then the second scroll chart was used which contained trends in dwelling counts and population estimates from 2003 to 2007. We could explain the change in dwellings between 2006 and 2007 if the observed change in dwellings was clearly related to the same obvious trend in the population estimates. [Figure 4b](#) contains an example of such a scroll chart, for data zone S01002806 in Fife.

Figure 4b. A scroll chart containing trends for both population and dwellings, for the QA of dwelling counts, for data zone S01002806 in Fife.



Note: SAPE- Small Area Population Estimates, SADC= Small Area Dwelling Counts.

The small area population estimates are derived using the cohort-component method where Census-based estimates are updated by 'ageing on' populations and applying information on births, deaths and migration. Further background information and methodology can be found in "Background Information on Small Area Population Estimates" <http://www.gro-scotland.gov.uk/statistics/publications-and-data/small-area-population-estimates/mid-2006-sape/background-info-sape.html>.

b) Where unexpected results are found, looking at other sources of data to try to identify the cause

There were some data zones in which the change in the number of dwellings between 2006 and 2007 still could not be accounted for. In these cases, they often could be explained from other data sources, as described below. The Scottish Neighbourhood Statistics website (www.sns.gov.uk) was used to retrieve other relevant data sets.

Some of these datasets could be used in conjunction with the population and dwelling figures to explain the unexpected changes. For instance, there are often unusual patterns occurring in areas of regeneration, which may have experienced

significant amounts of deprivation in the past. These areas often have large numbers of dwellings being demolished and new builds. This often leads to large number of dwellings being left vacant temporarily, and people moving address. Because these areas are undergoing so much change, a time-lag between different data collections can lead to significant differences in the figures, often on a temporary basis.

Below are the datasets and sources which we looked at to explain patterns in the remaining data zones.

- **Small Area Household Estimates** – GROS publishes data on vacant dwellings, second homes, and proportions of dwellings which are occupied but exempt from Council Tax (such as all-student households or armed forces base) as well as those which contain a Council Tax discount for only having one adult who is eligible to pay Council Tax. This information can help understand apparent discrepancies between the population and dwelling figures. For example, an area with a lot of vacant dwellings or second homes may have quite different trends in population and dwellings. It is also often harder to measure the population accurately in areas with a lot of students, as they tend to move house very frequently, and are less likely to register with a GP, or inform their GP when they move house. More information can be found from the GROS publication: *Estimates of Households and Dwellings, 2007* - <http://www.gro-scotland.gov.uk/statistics/publications-and-data/household-estimates-statistics/estimates-of-households-and-dwellings-in-scotland-2007/index.html>
- **Scottish Index of Multiple Deprivation (SIMD) (2006)** – This is produced by the Scottish Government to identify concentrations of deprivation across Scotland in a consistent way. An SIMD rank is produced for every data zone in Scotland. Based on this, the SIMD decile is produced, from one (most deprived) to ten (least deprived). This information, from the 2006 SIMD, has been used to analyse the data shown in this publication. More information about the SIMD is available from the Scottish Government website at <http://www.scotland.gov.uk/Topics/Statistics/SIMD/Overview>.
- **Investigation of a map of the data zone from the Scottish Neighbourhood Statistics website or from other GIS packages** to see the location and what is contained in the data zone. For instance, it may be apparent that is a lot of vacant land in a data zone from a map, as seen by streets with very few buildings.

Comparison of the types of dwellings on the Assessors' Portal from 2006 to 2007.

- A dwelling is a self-contained unit of accommodation such as a flat or house. GROS publishes information on the number of dwellings in each data zone in Scotland, along with information about the Council Tax band, type of property, and number of rooms. More information can be found on the GROS website: <http://www.gro-scotland.gov.uk/statistics/publications-and-data/household-estimates-statistics/estimates-of-households-and-dwellings-in-scotland-2007/index.html> and on the Scottish Neighbourhood Statistics website: www.sns.gov.uk.
- It is possible to find out what types of dwellings are being built or demolished, and this can help understand what is happening in that data zone. For instance in

data zone S01002806, which is located on the outskirts of Kirkcaldy in Fife, there has been an increase of 130 dwellings between 2006 and 2007. All of these new dwellings are detached properties. By looking at maps, it can be seen that these dwellings are part of a new residential estate on the edge of Kirkcaldy.

- **List of communal establishments** which were used for the 2006-based household projections. This includes information on care homes and student halls of residence. The opening and closing of communal establishments can have an impact on the number of people living in a data zone but this is unlikely to greatly affect the number of dwellings in that data zone. Therefore, this can explain apparent differences in trends in figures on the population and dwellings.

For 2007, we were able to explain for changes in the numbers of dwellings for 85 data zones using the methods other than comparing simply population and the number of dwellings. We were able to explain the changes in the numbers of dwellings between 2006 and 2007 in all but 15 data zones, using either the Excel-based system or other sources of data which we looked at. Most of these remaining 15 data zones were located in Edinburgh City. For these data zones, data sets containing individual records for 2006 and 2007 were investigated. These data sets contained details of all dwellings, their addresses, postcodes and data zones. By comparing the two datasets and using mapping packages and the Royal Mail website, we found that the postcodes of dwellings on the Assessors' Portal had been changed between 2006 and 2007, and this meant that they matched up to different (and now correct) data zones. For these data zones, we added comments to the Quality Assurance spreadsheet. We also sent an Excel spreadsheet containing these comments to a colleague in GROS Population and Migration Statistics Branch to assist with quality assurance of the 2007 Small Area Population Estimates.

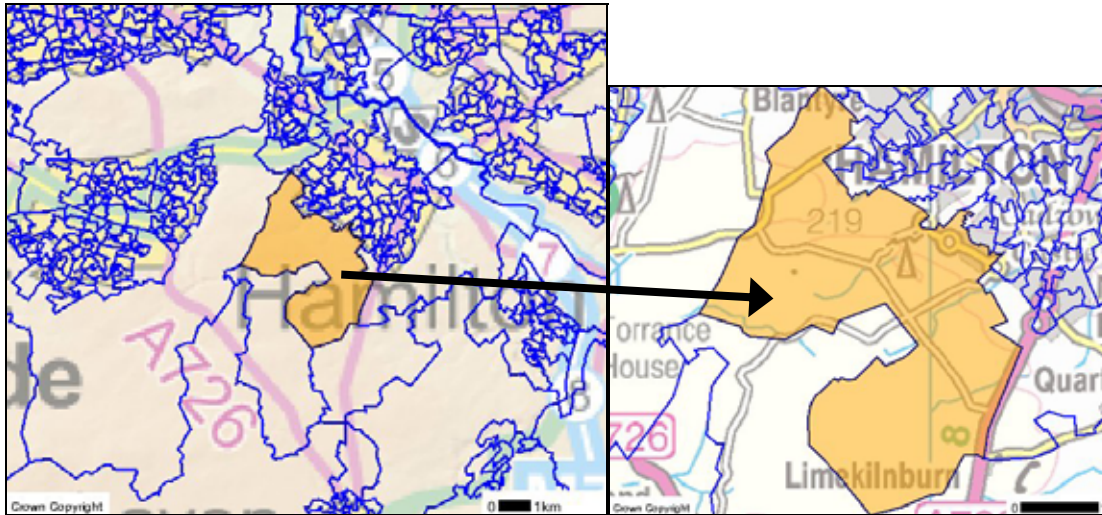
Annex C. Case studies of individual data zones

These have been chosen from the scatterplot in [Figure 3](#) to highlight examples of data zones

- which have experienced large changes in either population or dwellings between 2003 and 2006
- where trends in population from 2003 to 2006 do not match trends in dwellings.

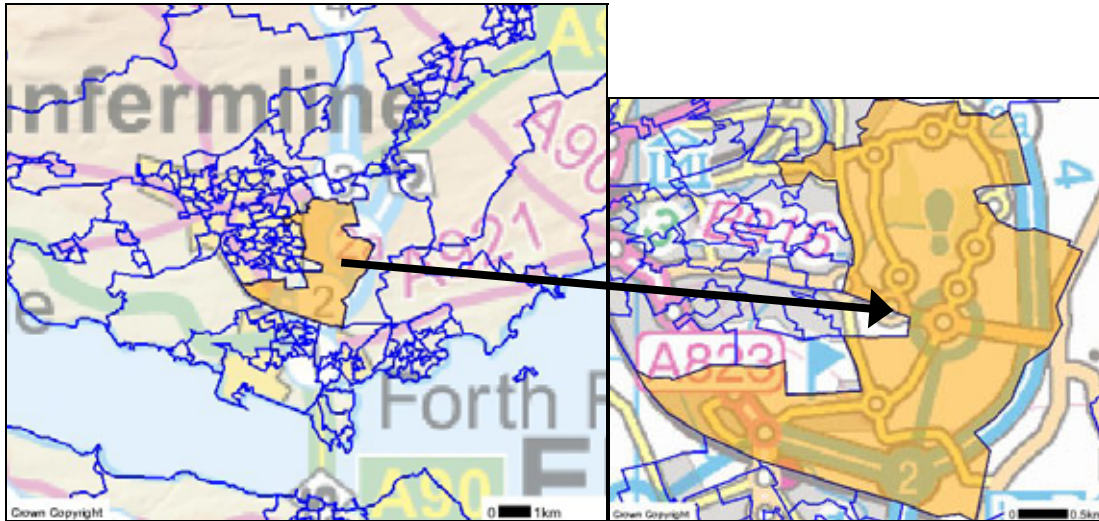
C1. Data zones which have had large percentage increases in both population and dwellings from 2003 to 2006

a. S01005804 in South Lanarkshire



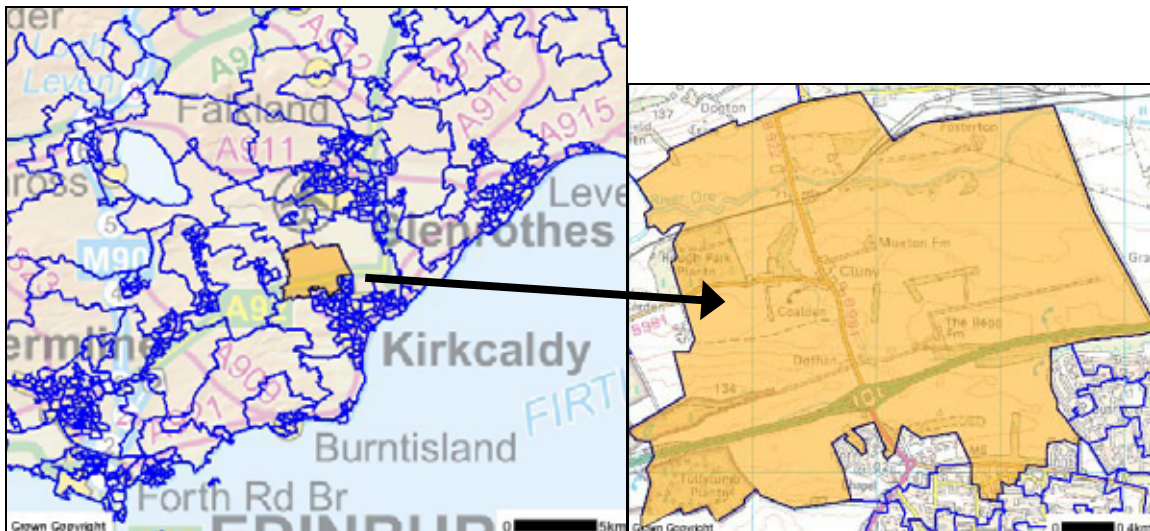
Source: Scottish Neighbourhood Statistics

- The data zone is located at the edge of an urban area (Hamilton)
- The estimated population of this data zone has risen from 825 in 2003 to 2,582 in 2006. This is an increase of 213 per cent.
- The number of dwellings has increased from 323 in 2003 to 1,193 in 2006 (an increase of 269 per cent).
- In this area, there has been a genuine increase in housing and therefore an increase in population.

b. S01002622 in Fife

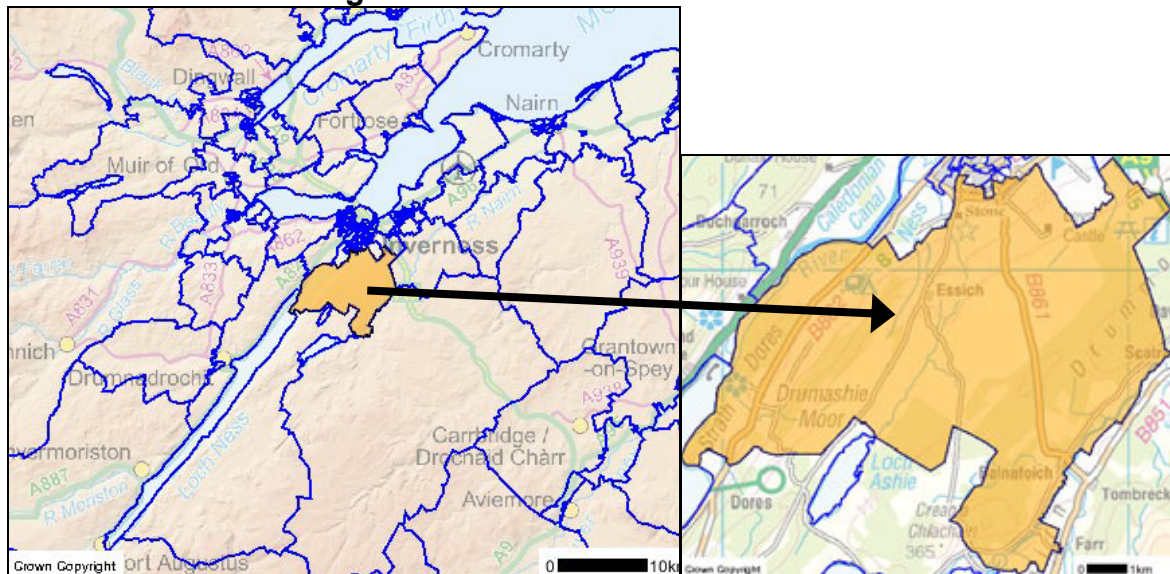
Source: Scottish Neighbourhood Statistics

- The data zone is located at the edge of a urban area (Dunfermline)
- The estimated population of this data zone has increased by 100 per cent between 2003 and 2006. In 2006, it had the largest population of any data zone in Scotland (4,510).
- The number of dwellings in this data zone has increased by 986 from 2003 to 1,891 in 2006. This is an increase of 91 per cent.
- As with data zone S01005804, there has been a genuine increase in housing and therefore an increase in population.

c. S01002806 in Fife

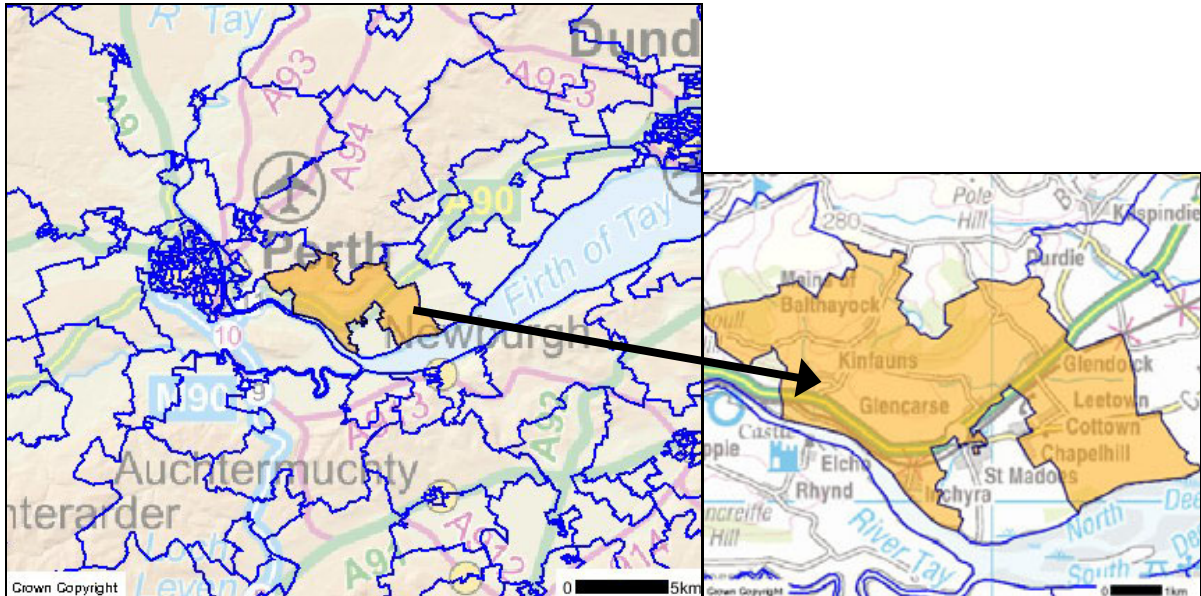
Source: Scottish Neighbourhood Statistics

- The data zone is located on the edge of an urban area (Kirkcaldy)
- There has been a 124 per cent increase in the population of this data zone from 575 in 2003 to 1,287 in 2006.
- The number of dwellings has increased by 147 per cent over the same time period - from 275 in 2003 to 679 in 2006.
- By comparing both trends in both population and the number of dwellings, the two factors are clearly interlinked.

d. S01003778 in Highland

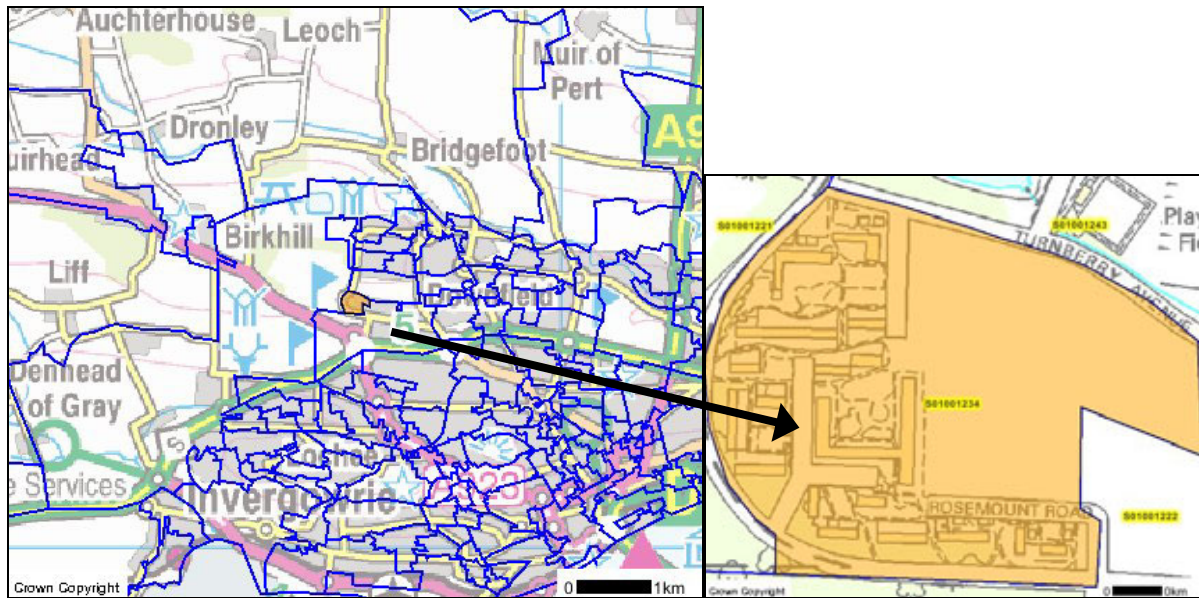
Source: Scottish Neighbourhood Statistics

- There has been a 71 per cent increase in the estimated population of this data zone between 2003 and 2006 (from 620 to 1,063 over this time period).
- The number of dwellings has increased by 137 per cent over the same time period (from 222 in 2003 to 527 in 2006).
- The data zone is located on the edge of an urban area (Inverness).

C2. Data zone which has had a large percentage increase in population and little change in the number of dwellings**a. S01005023 in Perth & Kinross**

Source: Scottish Neighbourhood Statistics

- There has been a 193 per cent increase in population in this data zone (from 723 in 2003 to 2,121 in 2006).
- The corresponding increase in the number of dwellings has only been four per cent. This increase in population may have been caused by a large increase in the number of migrant workers. A colleague in the GROS Population and Migration Statistics Branch was able to provide estimates of migrants, as these figures feed into published Small Area Population Estimates.

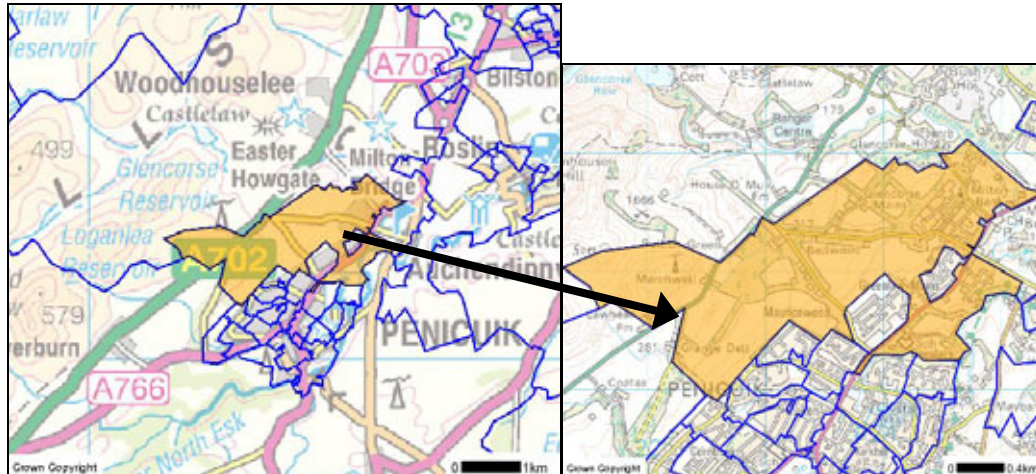
C3. Data zone which has had a large percentage increase in population and a large decrease in the number of dwellings**a. S01001234 in Dundee City**

Source: Scottish Neighbourhood Statistics

- There has been a 36 per cent increase in estimated population between 2003 and 2006 – from 386 in 2003 to 523 in 2006.
- There has been a 50 per cent decrease in the number of dwellings in this data zone – from 480 in 2003 to 241 in 2006.
- This area appears to have been undergoing regeneration: a large number of dwellings in this data zone were demolished between 2003 and 2004 and a large number of people have moved back into the area between 2005 and 2006. There are large numbers of dwellings being demolished and new builds. This often leads to large numbers of dwellings being vacant temporarily, and people moving address. Because these areas are undergoing so much change, a time-lag between different data collections can lead to significant differences in the figures, probably on a temporary basis.

C4. Data zones which have had large percentage increases in dwellings and not population

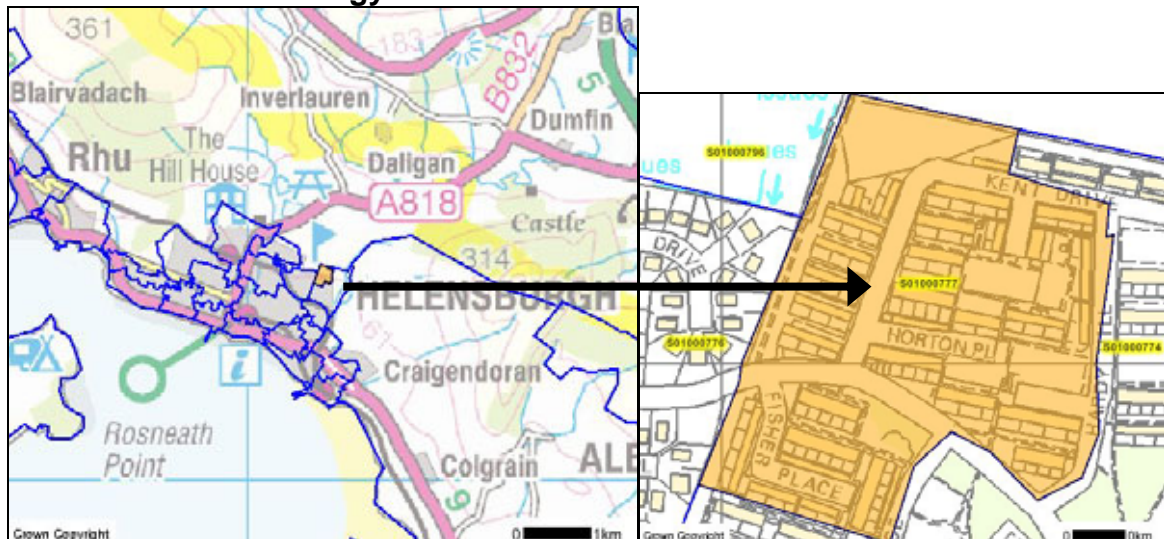
a. S01004151 in Midlothian



Source: Scottish Neighbourhood Statistics

- The number of dwellings in this data zone has increased by 73 per cent (from 208 in 2003 to 360 in 2006). Nearly all of the new dwellings were built between 2005 and 2006.
- The population has only increased by four per cent over this same time period.
- The difference between dwellings and population appears to be due to the time lag between the building of new houses and people moving to the new developments.
- There is an armed forces base located within this data zone (this is identified by the high proportion of dwellings which are occupied exemptions (58 per cent from the household estimates).

b. S01000777 in Argyll & Bute



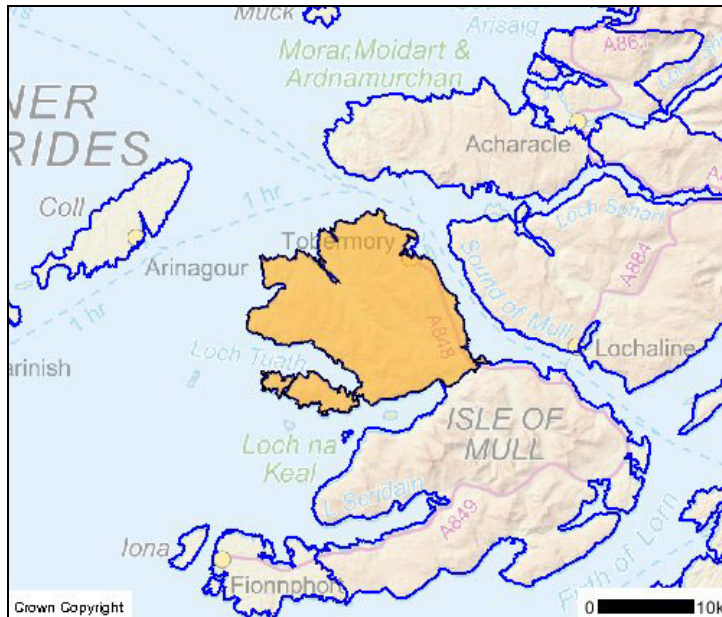
Source: Scottish Neighbourhood Statistics

- The estimated population has decreased from 513 in 2003 to 385 in 2006 (a decrease of 25 per cent).
- The number of dwellings has increased by 42 per cent - from 195 in 2003 to 277 in 2006. Most of this increase occurred between 2003 and 2004. There appears to be an improvement in postcode referencing between 2003 and 2004. It seems that in 2003, the postcodes of a number of dwellings in this data zone were amended. It is likely in 2003,

that these dwellings had postcodes which were assigned to an adjacent data zone (S01000774), as there was a sharp drop in the number of dwellings in this data zone between 2003 and 2004. The dwelling count data (such as more accurate postcode referencing) improved between 2003 and 2004. This does not therefore represent a genuine change in the numbers of dwellings.

- There is also an armed forces base in the area and so a lot of service personnel appear to be living in the area (79 per cent of dwellings are in the occupied exemptions classification).

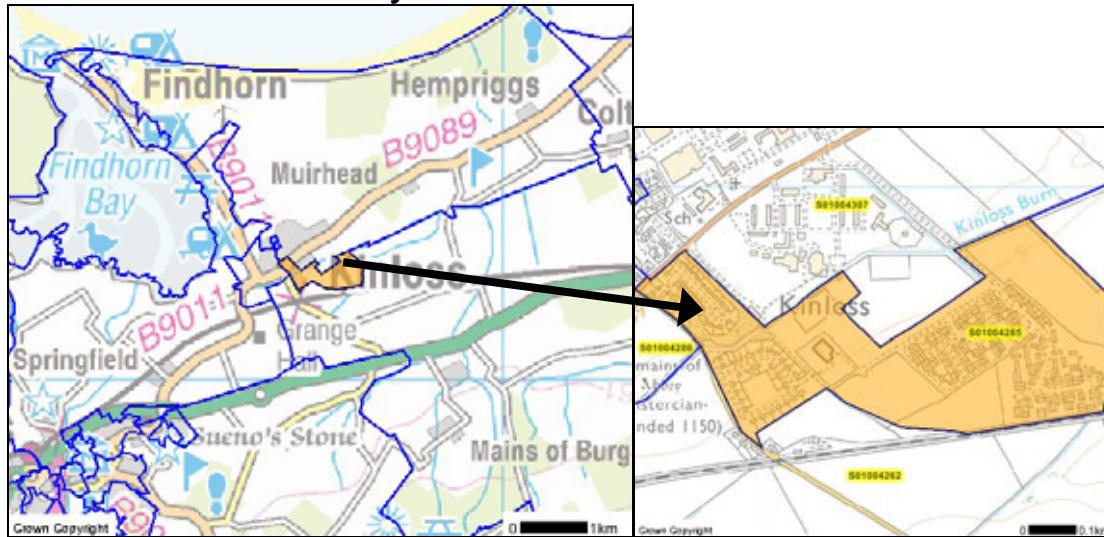
c. S01000830 in Argyll & Bute



- The number of dwellings has increased by 120 per cent between 2003 and 2006, from 192 in 2003 to 422 in 2006. Most of this increase occurred between 2003 and 2004.
- The population has only increased by two per cent over this time period.
- There are a lot of second homes in this data zone (14 per cent of dwellings are second homes from the 2007 household estimates).
- As with data zone S01000777, it is likely in 2003, that these dwellings had postcodes which were assigned to an another data zone.

C5. Data zones which have had large percentage decreases in population but the number of dwellings has remained constant

a. S01004285 in Moray

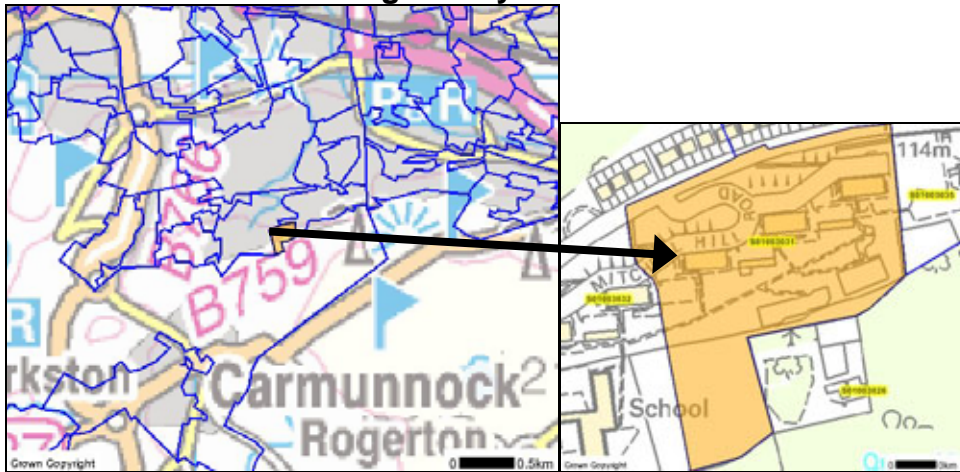


Source: Scottish Neighbourhood Statistics

- The estimated population has decreased by 41 per cent (from 829 in 2003 to 493 in 2006).
- The number of dwellings has remained the same over this time period.
- There is an Armed Forces Base in this data zone, and this explains the high proportion of occupied exemptions in this data zone (99 per cent). As with data zone S01000777, it is likely that some service personnel are moving out of this area.

C6. Data zones which have had large percentage decreases in both population and dwellings

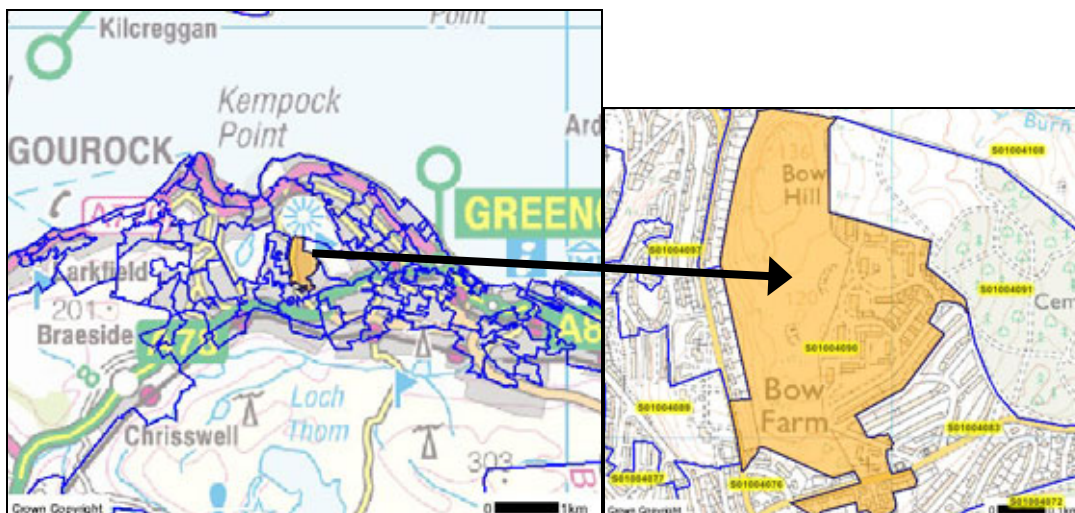
a. S01003031 in Glasgow City



Source: Scottish Neighbourhood Statistics

- In 2003, the estimated population was 377. In 2006, the estimated population of this data zone was 0.
- In 2003, the number of dwellings in this data zone was 342. All of the dwellings were been demolished between 2003 and 2006. There are no dwellings in this data zone in 2006.

b. S01004090 in Inverclyde



Source: Scottish Neighbourhood Statistics

- The number of dwellings has decreased in this data zone by 70 per cent from 2003 to 2006, from 484 in 2003 to 146 in 2006. This data zone has experienced the second largest percentage decrease in the number of dwellings after S1003031 in Glasgow City. All of the dwellings have been demolished between 2004 and 2005.
- The population has decreased by 31 per cent over the same time period, from 509 in 2003 to 354 in 2006.
- This is an area of regeneration.